



LearnSight Systems Companion Worksheet

History of the Periodic Table - Companion Worksheet

Name _____ Period _____

History of the Periodic Table

Dmitri Mendeleev _____

The group he did not account for: _____ Why?

His two predicted elements: gallium, germanium

Henry Moseley _____

Periodicity _____

The five trends

1. atomic radii
2. ionic radii
3. ionization energy
4. electronegativity
5. reactivity

ANSWER KEY

For teacher use - do not distribute with the student worksheet.

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Sample answers

Dmitri Mendeleev - Arranged elements by increasing atomic mass and grouped them by similar properties; left gaps for undiscovered elements and predicted their properties.

Group not accounted for - Noble gases (Group 18). Why? They had not been discovered yet and are nearly unreactive, so they were easy to miss.

Predicted elements (given) - gallium, germanium

Henry Moseley - Used X-ray spectroscopy to determine atomic number and reordered the table by atomic number instead of atomic mass.

Periodicity - Properties of elements are periodic functions of atomic number; when lined up by atomic number, properties repeat in a predictable pattern.

Five trends (given) - atomic radii; ionic radii; ionization energy; electronegativity; reactivity